6GJ7

Medium-Mu Triode—Sharp-Cutoff Pentode

ELECTRICAL

Heater Characteristics and Ratings

Voltage (AC or DC)	6.3 ± 0.6	V
Current at 6.3 V	0.410	A
Heater-cathode voltage[a]	110 max	V

Direct Interelectrode Capacitances (Approx.)

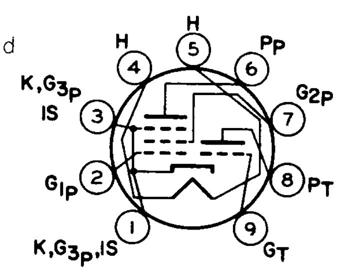
Triode Unit		
P_T to G_T	1.8	pF
G_T to K, H	3.3	pF
P_T to all except G1p	1.7	pF
Pentode Unit (With external shield)		
Input	6.2	pF
Output	3.5	pF
P_p to G1p	0.009	pF
G1p to G2p	1.5	pF
Between Triode and Pentode Units		
P_T to P_p	0.025 max	pF
P_p to G_T	0.01 max	pF
P_T to G1p	0.01 max	pF
G_T to G1p	0.01 max	pF

MECHANICAL

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2 in
Maximum Seated Length	1-3/4 in
Diameter	0.750 to 0.875 in
Envelope	JEDEC T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No.E9-1)

TERMINAL DIAGRAM (Bottom View)

Pin 1 – Cathode, Pentode Grid No.3, Internal Shield
Pin 2 – Pentode Grid No.1
Pin 3 – Same as Pin 1
Pin 4 – Heater
Pin 5 – Heater
Pin 6 – Pentode Plate
Pin 7 – Pentode Grid No.2
Pin 8 – Triode Plate
Pin 9 – Triode Grid



9QA

CHARACTERISTICS

	Triode Unit	Pentode Unit	
Plate Voltage	100	170	V
Grid-No.2 Voltage	-	120	V
Grid-No.1 Voltage	-3	-1.2	V
Amplification Factor	20	55[b]	

	Triode Unit	Pentode Unit	
Plate Resistance (Approx.)	-	0.35	MΩ
Transconductance	9000	11000	μmhos
Plate Current	15	10	mA
Grid No.2 Current	-	3	mA

DESIGN-MAXIMUM RATINGS

	Triode Unit	Pentode Unit	
Plate-Supply Voltage	600	600	V
DC Plate Voltage	140	275	V
Grid-No.2 Supply Voltage	-	600	V
DC Grid-No.2 (Screen-Grid) Voltage	-	275	V
DC Grid-No.1 (Control-Grid) Voltage	-	-50	V
Cathode Current	22	20	mA
Plate Dissipation	1.8	2.4	W
Grid-No.2 Input[c]	-	0.55	W

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance			
For fixed-bias operation	0.5	1	MΩ
For cathode-bias operation	0.5	2.2	MΩ

[a] The hum should be minimized in intercarrier receiver applications by limiting the heater-cathode voltage to 100 volts rms, and in AM receivers to 50 volts rms.

[b] Grid No.2 to grid No.1; approximate value.

[c] When control grid bias is between -1.5 and -2 volts, screen dissipation is limited to 0.50 watt. When this bias is greater than -2 volts, maximum screen dissipation is 0.36 watt.